

**REMARKS**

**Introduction**

Claims 1-15 were pending in this application and considered in the Office Action. Claims 1-15 are cancelled, without prejudice. New claims 16-30 have been added. It is believed that the amendments made are fully supported by the specification as filed. No new matter has been introduced.

**Claim Rejection – 35 U.S.C. § 102**

Claims 6-8 have been rejected under 35 U.S.C. §102(e) as being anticipated by Brown et al., US Patent No. 6,671,805 (hereinafter “Brown”). Applicants have cancelled claims 6-8 without prejudice. Hence, the rejection is moot with respect to those claims.

Claims 1-5 and 11-14 have been rejected under 35 U.S.C. §102(e) as being anticipated by Ron Steinfeld, Laurence Bull and Yuliang Zheng, “Content Extraction Signatures”, (hereinafter “Steinfeld”).

Applicants have cancelled claims 1-15 without prejudice. Independent claim 16 has been added to incorporate portions of original claims 3 and 11. Similarly, new independent claim 17 incorporates portions of original claims 4 and 11. Independent claim 18 has been added to incorporate portions of original independent claim 5 and dependant claim 12, in view of new claim 16. Further, new claim 19 has been added to include portions of original claim 6 and to depend from independent claim 18. Independent claim 20 has been added to incorporate portions of original independent claim 7 and dependant claim 12, in view of new claim 17. Further, new claim 21 has been added to include portions of original claim 8 and to depend from independent claim 19. Newly added claims 16-21 are fully supported by claims 3-7 and 11-12 as originally filed. Hence, no new matter has been added by the presentation of claims 16-21.

The addition of new claims 22-30 are fully supported, for example, at paras. 0195-0235, and Figs. 21-23 of the present published application. New claims 22-30 relate to a situation where a disclosure document creator can allow/prevent blackout of additional blackout portions of the disclosure document, while the disclosure document creator is not allowed to change the blackout portions applied by the original document creating device 102. With respect to new claim 22, an example of an “electronic calculator” is disclosed in Fig. 2. With respect to new claim 22, an example of process “a” is disclosed in steps 2102-2105 of Fig. 21. The first portion of process “a” in claim 22 pertains to “creating additional redacted control data.” The “additional redacted control data” corresponds, for example, to the random numbers generated for the “black blocks” of step 2103 of Fig. 21 (see para. 0198 of published application). Furthermore, the remaining portion of process “a” of claim 22 discusses a series of hashing operations. While Fig. 21 does not separately show these hashing operations, step 2106 of Fig. 21 does disclose the signing of a two-input one-way function. Furthermore, in discussing the signing of a two-input one-way function, the specification of the present application states that hash functions  $h(A)$  and  $h(B)$  are performed on input values A, B when generating a signature (see paras. 0221-0230 of the published application). Further, with respect to new claim 22, an example of process “b” is disclosed in step 2106 of Fig. 21; and examples of processes “c” and “d” are disclosed in step 2107 of Fig. 21. With respect to new claim 22, an example of processes “e” through “h” are disclosed in steps 2202-2204 of Fig. 22. Therefore, Applicants submit that the present application discloses the limitations recited by claims 22-30. No new matter has been added by the presentation of those new claims above.

In view of these newly added claims, these rejections are respectfully traversed. Applicants hereby request reconsideration and allowance of the claims in view of the following arguments.

Applicants have added independent claims 16-17 which both recite, *inter alia*, that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document.

Similarly, independent claims 18 and 20 both recite, *inter alia* that that the electronic document disclosure system includes at least a disclosure document creator unit which takes out the disclosure object document from the document management unit, at the time of acceptance of an information disclosure request, omits information not to be disclosed from the disclosure object document, creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, and sends the disclosure document to a recipient unit.

Steinfeld does not disclose that that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or that the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20. Steinfeld discloses a content extraction digital signature that allows verifiable content extraction with minimal multi-party interaction. As shown in Fig. 1 of Steinfeld, University A uses a Sign algorithm of a

Content Extraction Signature (CES) scheme to sign an original document that is divided into portions. Further, University A produces the CES to Student B in addition to the full document. Student B then extracts a subdocument A' of the original document consisting of a selected subset of the document submessages. Student B then runs an Extract algorithm of the CES scheme to produce an extracted signature by the University A for the extracted subdocument A'. While the CES in Steinfeld does extract the signature of the University A, Steinfeld does not affix another signature generated using a different key. As a result, Steinfeld does not disclose that that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or that the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20.

Brown does not disclose that that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or that the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20. Brown discloses a computer-implemented method for digitally signing a portion of an electronic document by a plurality of signers. Furthermore, the plurality of signers each have a signing role and a unique

private key for applying a digital signature. While the plurality of signers each have a signing role, one digital signature is applied for each of the signers by a central system. Therefore, Brown does not disclose that that the electronic document disclosure method includes the step of further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or that the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Steinfeld and Brown do not anticipate claims 16-18 and 20, nor any claim dependent thereon.

Applicants have added independent claim 22 to recite, *inter alia*, that an electronic document redacting system includes at least a first electronic calculator executing a first program which creates a disclosure object electronic document including at least an original electronic document comprising a plurality of constituent elements and authenticity assurance data, wherein the first electronic calculator implements the first program and executes a series of processes including a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document and calculates a hash value by means of an input of the additional redacted control data as a cryptographic hash function as well as

calculating a hash value by means of an input of the constituent element as a cryptographic hash function.

Steinfeld does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document. As discussed above, Fig. 1 of Steinfeld discloses that University A uses a Sign algorithm of a Content Extraction Signature (CES) scheme to sign an original document that is divided into portions. Afterwards, University A produces the CES and the full document to Student B. However, University A does not produce redacted portions of the full document. As a result, Steinfeld does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document, as recited by new claim 22.

Brown does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document. As discussed above, Brown discloses a computer-implemented method for digitally signing a portion of an electronic document by a plurality of signers; whom each have a signing role and a unique private key for applying a digital signature. However, Brown is not concerned with redacting data or creating additional redacted control data. Therefore, Brown does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document, as recited by new claim 22.

Hence, neither Steinfeld nor Brown anticipate claim 22 or any of its dependent claims. Applicants therefore respectfully request that the Examiner withdraw the anticipation rejections.

**Claim Rejection – 35 U.S.C. § 103**

Claims 9-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Steinfeld in view of Brown and further in view of Bush et al., US Patent No. 6,963,971

(hereinafter “Bush”). Applicants have cancelled claims 9-10 without prejudice. Hence, the rejection is moot with respect to those claims.

Claim 15 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Steinfeld as applied to claim 13 above, and further in view of Bush. Applicants have cancelled claim 15 without prejudice. Hence, the rejection is moot with respect to those claims.

These rejections are respectfully traversed. Applicants hereby request reconsideration and allowance of the claims in view of the following arguments.

Bush does not disclose that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or that the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20. Bush discloses a method for sending registered, authenticated electronic documents. As shown in Fig. 9, the authentication system includes a sender 199, an authentication agent 215, a distribution agent 233 and a recipient 512. A sender 199 uses authentication software to create an undecryptable digital string from an electronic document that is to be authenticated. The authentication agent 215 authenticates the data and issues keys that will be utilized by the sender 199, distribution agent 233 and the recipient 512 to decode the encrypted data. Thus, Bush is directed towards a system that provides the authentication of data by coordinating the use of keys utilized for encrypted data. However, Bush is not concerned with redacting data or creating additional redacted control data. Furthermore, Bush is not concerned with applying digital signatures to data during the

authentication process. Therefore, Bush does not disclose that the electronic document disclosure method includes the step of at least further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20.

Further, Bush does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document. As discussed above, Bush is directed towards a system that provides the authentication of data by coordinating the use of keys utilized for encrypted data. However, Bush is not concerned with redacting data or creating additional redacted control data. Therefore, Bush does not disclose a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document, as recited by new claim 22.

Therefore, Steinfeld, Brown and Bush fail to disclose or suggest: further affixing another signature generated by using a private key which is different from the private key used when the electronic signature is affixed to the disclosure document, as required by new claims 16-17, or the electronic document disclosure system includes at least a disclosure document creator unit which creates another signature generated by a private key which is different from the private key used for affixing an electronic signature of the original document creator, as required by new claims 18 and 20, or a process which creates additional redacted control data with respect to each of the constituent elements of the original electronic document, as required by new claim 22. Accordingly, even assuming *arguendo* that Steinfeld, Brown and Bush were combined as



suggested by the Examiner, any such combination of two or more of these references would be missing one or another of the respective claimed features, and it would not have been obvious to modify any Steinfeld/Brown or Bush combination to yield the invention of any of Applicants independent claims 16-18, 20 and 22.

Under Federal Circuit guidelines, a dependent claim is non-obvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claims 16-18, 20 and 22 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon (claims 19, 21 and 23-30) are also patentable.

### **Conclusion**

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

**Application No.: 10/787,262**

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**Date: June 30, 2008**

WDC99 1583893-1.064235.0016

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